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To Mike McClelland	
Co.	Phone # (510) 540 3844
Dept.	Fax #
Fax #	

Cal/EPA

Department of Toxic Substances Control

700 Heinz Avenue, Bldg. F, Suite 200 Berkeley, CA 94710

Pete Wilson
Governor

Peter M. Rooney
Secretary for Environmental Protection

May 1, 1998

Fax
Rec'd 5/4/98
MCM

Commanding Officer
Engineering Field Activity, West
Naval Facilities Engineering Command
Attn: Mr. Michael McClelland, Code 1832
900 Commodore Drive
San Bruno, California 94066-2402

COMMENTS ON PARCEL E DRAFT FEASIBILITY STUDY FOR PARCEL B, HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Dear Mr. McClelland:

Enclosed are comments from the San Francisco Bay Regional Water Quality Control Board on the draft Feasibility Study for Parcel E. As Mr. David Leland points out in his introductory letter, the California Environmental Protection Agency considers the draft to be incomplete until the completion of the ecological validation study.

If you have questions regarding these comments, please call David Leland at (510) 286-4267, or me at (510) 540-3844.

Sincerely,

Valerie Heusinkveld

Valerie Heusinkveld
Hazardous Substances Scientist
Office of Military Facilities

Enclosure

cc: see next page

Pete Wilson
Governor

Cal/EPA

San Francisco Bay
Regional Water
Quality Control
Board

2101 Webster Street
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Oakland, CA 94612
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May 1, 1998
File: 2169.6032

Ms. Valerie Heusinkveld
Department of Toxic Substances Control
Northern California Region
700 Heinz Avenue, Suite 200
Berkeley, CA 94710

Re: Draft Parcel E Feasibility Study Report, Hunters Point Shipyard

Dear Ms. Heusinkveld:

Regional Water Quality Control Board (Board) staff have reviewed the report and are providing comments as an attachment to this letter. Please note that as a result of the additional field investigation work planned in support of ecological risk validation, the remedial units, alternatives, soil volumes, and costs may change. This in turn would result in changes to the FS. Accordingly, our review of the Draft was not comprehensive. Notably, Appendices F and G were not reviewed. As a result, we anticipate the possibility of a somewhat more extensive review of the Draft Final than normally would be the case, even in the absence of any changes resulting from the validation study.

If you have any questions regarding this letter, please call me at 510-286-4267.

Sincerely,

David F. Leland, P.E.
Groundwater Protection and Waste
Containment Division

Attachment

C:\Hunters Point\afsdc.ap8

cc: Ms. Sheryl Lauth (SFD-8-2)
U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, CA 94105

Regional Water Quality Control Board, San Francisco Bay Region, Comments on the Draft Parcel E Feasibility Study Report, Hunters Point Shipyard, dated January 15, 1998.

GENERAL COMMENTS:

1. The TPH screening values used to delineate TPH soil contamination and groundwater plume areas are values proposed by the Navy and are still under discussion with the RWQCB. Once a screening value is agreed on, the RWQCB will ask the Navy to replot the TPH areas to reflect the agreement.

2. Appendix E presents the methodology used to calculate Dilution Attenuation Factors for screening of groundwater concentrations. Given the decision to use a default factor of 10 to account for dilution and attenuation in Parcel B, the RWQCB recommends using a similar approach in Parcel E. If the Navy intends to use the DAF approach for Parcel E, the RWQCB requests a reevaluation of the modeling results application, particularly with regard to the apparent application of modeling results based on an assumption of source removal to alternatives which assume that sources will remain in place.

3. The report does not provide any analysis to support the statements for several of the alternatives that groundwater collected from interceptor trenches would not require treatment. RWQCB staff requests documentation or calculations to support the assumption that no treatment of groundwater will be required.

4. Several of the alternatives include use of collected groundwater in constructed wetlands. What are the Navy's plans with respect to such wetlands? The construction of a cap over the IR01/21 debris zone would involve destruction of the existing wetland in this area. Mitigation for the loss of these wetlands should be a part of these alternatives. The Navy's plan for mitigation should be clearly described.

5. All of the alternatives include sheetpile walls and most of the alternatives include interceptor trenches along all or a portion of the shoreline. Given the design life of a sheetpile wall in this environment (a life of about 25-30 years has been mentioned), and given the expense of replacing such a solution, RWQCB staff are concerned that these alternatives do not represent permanent remediation of Parcel E contamination. Can the Navy assure that adequate funding would be available in a timely manner to repair or replace components of these solutions that fail?

6. Several of these alternatives involve what is described as encapsulation of debris zones. In fact, the debris zones would not involve an engineered system beneath the debris zones, but would rely on geologic controls to limit water infiltration into the debris zones. The Navy needs to address the issue of seepage and infiltration into the debris zones for those alternatives including encapsulation. At a minimum, these alternatives should include monitoring and leachate collection systems within the limits of the capped areas.

7. The Navy recently submitted the Parcel F Feasibility Study for review. The alternatives described in that document will require integration with the Parcel E alternatives. What analysis has the Navy done on this issue? Are each of the Parcel E alternatives compatible with each of the Parcel F alternatives? If not, where are there incompatibilities, what are the nature of the incompatibilities, and how would they be resolved?

SPECIFIC COMMENTS:

1. Page ES-5. As has been noted in recent discussions for Parcel B, referencing the remediation of contamination to the water table introduces ambiguity into any description or calculation of the extent of proposed remediation. It would seem that a minimum depth of remediation should be established, regardless of water table position at some time in the future when remediation will occur. This minimum depth might be based in part on post-remediation construction or infrastructure activity scenarios and the potential for exposure associated with such scenarios.

2. ES-5. Only vadose zone soils are considered with respect to leaching or impacts to groundwater. How were vadose zone soils defined specifically? How are water table fluctuations handled in defining vadose zone soils considered in the analysis? It seems probable that COCs could occur in soils at concentrations of concern in the zone of groundwater fluctuation, a zone where soils would sometimes be above and at other times below the water table.

3. ES-7. What is meant by mitigative measures? Are they part of the remedial alternatives or are they separate? How will these measures be reflected or represented in the Record of Decision (ROD)? Are some measures in place?

4. ES-8. Does the no action alternative included removal or interim actions? If so, which ones?

5. ES-11. The text states that groundwater in areas other than four AOCs will naturally attenuate before reaching the interceptor trench. What is the basis for this statement? see also General Comment 2 with regard to questions on the model results application.

6. ES-14. If treated water did not meet pretreatment standards, and the Navy chose not to treat further, how would the water be disposed?

7. ES-18. RWQCB staff don't agree with the conclusion that collection by interception and Bay discharge is more protective than collection by interception and POTW discharge. The POTW will treat further and will achieve discharge concentrations equivalent to what would be required for Bay discharge (NPDES shallow water discharge).

8. ES-19. What is meant by completing an incomplete exposure pathway?

9. ES-22. Wording in several paragraphs is confusing. See paragraphs 2 ("Installing...") and 5.

10. 2-16. The TDS measurement of 77,000 mg/L has been noted previously as suspect. Please include some modifying language with respect to this measurement.

11. 2-16. Please include or reference B-aquifer groundwater contour maps.

12. 2-19. Regarding the suitability of the A-aquifer for use as a drinking water supply, please provide a figure showing A-aquifer thickness and areal extent in Parcel E. Show the estimated extent of groundwater with TDS above 3,000 mg/L on this figure.

13. 2-27. It may be necessary to revisit the groundwater data to verify that any areas screened from the analysis based on the one hit rule are not areas of concern.

14. 2-32. No mention is made of contaminants in the B-aquifer. Did no B-aquifer sampling locations pass the screening criteria?

15. 2-34. Please clarify the reference to workers in the B-aquifer groundwater discussion on this page.

16. 2-81. Please explain why an ERA was not conducted or why results are not presented for IR-13.

17. 2-99. Does the RI address the relationship of storm drain and adjacent soil and groundwater sampling results?

18. 2-108. Please explain what the term " even distribution of depths" means.

19. 2-126. Please explain why no residential scenario risk assessment results are presented for IR-76.

20. Table 2-7. Please explain why the various data gaps are not considered to have any impact on the FS. It seems possible that identification of new areas requiring remediation could affect the FS. For example, contaminated riprap would alter the FS, since technologies appropriate to remediation of contamination in riprap have not been evaluated in the FS.

21. 3-3. The RAO language referencing the groundwater table as the lower limit of protection may not be adequately protective as a basis for defining remedial units in wet years when the water table is elevated to depths within 10 feet of ground surface. The RAO should be revised to reflect the risk assessment assumptions.

22. 3-6. With respect to the statement that the City does not develop groundwater supplies within the city for potable use, please confirm that the City's Groundwater Master Plan does not include any potable water uses now or in the future.

23. 3-7. Averaging TDS values over the whole parcel is misleading when comparing to the Resolution 88-63 values. What methods/data were used to calculate the averages? Only limited data are available from the B- and bedrock aquifers. Use the TDS data to delineate areas that do not meet the definition, instead of averages.

24. 3-21. Please discuss whether any portion of Parcel E is in the designated 100-year flood plain.

3-22. The text notes that Title 23, Chapter 15 requirements may be relevant and appropriate, but a conclusion on this point is not reached. Although Title 23, Chapter 15 does not appear in Table 3-3, the text on p. 5-23 indicates that the alternative will be compliant with Title 23, Chapter 15 requirements. Please clarify.

25. 3-25. Table 3-4 also notes groundwater monitoring requirements in CCR Title 23, Chapter 15.

26. 3-29. The text of the Parcel B ROD (Section 2.1) provides useful background for understanding groundwater quality in Parcel B and the Navy and RWQCB positions regarding Resolution 88-63. Please include a similar discussion of groundwater quality for Parcel E.

27. Section 3.3. How are the completed and ongoing removal actions addressed with respect to the no action and potential institutional control remedial alternatives. Does the FS assume these actions are in place or will be completed and will be functional? If so, this should be made clear in the discussions of these alternatives.

28. Section 3.3.2.2. Is the LNAPL at IR-3 miscible or immiscible?

29. 3-45, 2nd paragraph. Further explanation of the cross-contamination potential is necessary.

30. 3-45, 3rd paragraph. The text mentions depth of groundwater as the excavation depth protective of human health. Given the likely elevated groundwater levels associated with the current wet winter, and given the potential depth of construction associated with infrastructure activities, it is possible that excavation to the water table will not be protective of human health. How would this affect the analysis against the nine criteria? How can human health protection be assured if there is uncertainty regarding the depth of excavation? If excavation were to be completed to depths less than those used in the risk assessment, what would be the residual risks? Would the materials left in place constitute an unacceptably high level of residual risk? What additional measures would be required to render remedial action protective of human health?

31. 3-49. The discussion of the basis for reaching the conclusion that the IR-01/21 and IR-02 Northwest debris zones meet the 7 criteria needs to be expanded to include an evaluation of how the debris zones meet these criteria.

32. 3-78. Would the requirement for drying beds remain if the excavated saturated soils were used for foundation material at IR-01/21 or IR-02 Northwest?

33. 3-79, 3-80. The discussion of collection and discharge without treatment states that encapsulation of AOC areas would be required to implement the GRA. Please address the need for groundwater extraction within the encapsulated areas. Verification monitoring of water levels within the areas will be necessary. Also, if groundwater extraction were necessary in the

encapsulated areas, please provide an evaluation of appropriate process options.

34. 3-80. The text notes that well points are only effective to about 20 feet bgs. Elsewhere in the text, it is noted that trenches are only effective to about 30 feet bgs. In what specific areas of Parcel E would these technologies not be effective in collecting contaminated groundwater at depth?

35. 3-90. The text of line 8 states that EPA guidance documents that AS/SVE technology has been demonstrated on Parcel E groundwater. Is this correct, or has the demonstration been on water similar in nature to Parcel E groundwater? Please explain and clarify.

36. 3-91. Regarding permeable treatment beds, it appears that metals are erroneously included as a nonpolar organic compound in the second paragraph.

37. 3-92. Elsewhere in Section 3.3.2, it is frequently noted that certain process options would require pilot tests to better establish the feasibility of the options for remediation of soil and groundwater contamination in Parcel E. Given that available groundwater data are not adequate to assess the potential, status, or rates of biodegradation in Parcel E, a "pilot test" of natural attenuation, and in particular intrinsic biodegradation, would also be necessary.

38. 3-92. The discussion of natural attenuation states that contaminants are degraded by the natural attenuation processes. This is true for those contaminants subject to biological degradation processes, such as petroleum hydrocarbons and many VOCs. For what other contaminants and under what conditions would this be true?

39. Table 3-8. Groundwater collection, treatment, POTW discharge option. Has the Navy estimated the volume of flow and verified the willingness of the CCSF SWPCP to accept the discharge? If not, what would be the alternative plan?

40. 4-6. The text regarding addressing data gaps should note that the current plan is to delay issuance of the draft final FS until the ecological risk validation study results are available and can be incorporated into the definition of remedial units.

41. 4-14. Please clarify whether the estimated costs for the separate cap alternative assume import of material or use of soils from elsewhere at Hunters Point for the foundation layer.

42. 4-16. A single cap is selected for parcel-wide remedial alternative development, based primarily on cost of managing soils between the separate caps in a separate remedial action. However, the Parcel E miscellaneous soils unit would still need to be addressed. What are the estimated costs of managing the Parcel E miscellaneous soils between the separate cap areas, if considered as an increment to the Parcel E miscellaneous soils remedial unit?

43. 4-19, line 1. What is the reason for the range in the volumes of soil that would be consolidated under this alternative? If these are individual location volumes, what is the estimated total volume of soil that would be consolidated under the alternative?

44. Figure 4-4. The figure identifies a single layer cap. Shouldn't this be a multi-layer cap? Also, please explain the rationale for the lateral extent of the cap.

45. 4-26. No particular mention of the depth of excavation is made in discussing the excavation alternative. The RI indicates that LNAPLs in soil extend well below the water table. How does this alternative address soils containing LNAPLs at depth?

46. 4-28. What provisions would be made for collecting any LNAPL residuals post-backfilling of the excavation?

47. 4-33. It is not clear how the CAMU criteria are met. Please present a point-by-point discussion of the proposed action in comparison to the criteria.

48. 4-42. Alternatives 6 and 7 are quite similar. Please provide some explanation as to why Alternative 6 was selected and Alternative 7 was rejected.

49. 4-51. It is not clear how the CAMU criteria are met. Please present a point-by-point discussion of the proposed action in comparison to the criteria.

50. 4-67. Please explain how well point systems would be effective if excavation depths exceed 20 feet, and could be as much as 48 feet.

51. 4-79. Please explain how collecting contaminated groundwater and discharging to the Bay or a wetland is more protective of the environment than the current condition of groundwater discharging to the Bay.

52. 4-81. Please explain how receptors would be protected from contact with groundwater discharged to a wetland.

53. 5-15. The discussion of environmental impacts needs to do a better job of identifying clearly the impacts from the actions. For example, the text notes that the sheetpile wall would be installed about 20 feet offshore under this alternative. This should be followed by a direct statement to the effect that this would result in the loss of existing intertidal and subtidal habitat between the existing shoreline and the location of the sheetpile wall. An estimate of the area of subtidal habitat lost should also be included.

54. 5-16. How would sheetpile be installed if the wall were located 20 feet offshore? What would be the environmental impacts of the installation process itself, separate from the loss of habitat between the wall and the existing shoreline?

55. 5-21. Please explain the basis for the range of soil excavation volume estimates.

56. 5-23. The discussion of closure and postclosure requirements notes Title 22 factors to consider in establishing closure requirements, and notes similarity in objectives between Title 22 and CAMU requirements. What appears to be lacking is an evaluation of the action proposed in this alternative against the listed Title 22 factors. Please evaluate this alternative against the applicable Title 22 standards.

57. 5-26. Which groundwater modeling is referenced in the discussion of natural attenuation? Did the referenced modeling assume that the sources of contaminants would remain in place indefinitely, as assumed under this alternative? The modeling discussed in Appendix E appears to assume source removal. If the modeling assumed source removal, how does this affect the conclusion that groundwater collected in the interceptor trench would meet groundwater screening criteria?

58. 5-31. Please describe specifically what is meant by the substantive and stringent discharge criteria that would render NPDES requirements for use of BAT not pertinent.

59. 5-38. The discussion of environmental impacts needs to do a better job of identifying clearly the impacts from the actions. For example, the text notes that the sheetpile wall would be installed about 20 feet offshore under this alternative. This should be followed by a direct statement to the effect that this would result in the loss of existing intertidal and subtidal habitat between the existing shoreline and the location of the sheetpile wall. An estimate of the area of subtidal habitat lost should also be included.

60. 5-38. How would sheetpile be installed if the wall were located 20 feet offshore? What would be the environmental impacts of the installation process itself, separate from the loss of habitat between the wall and the existing shoreline?

61. 5-39. The discussion needs to include estimates of the time required for natural attenuation to reduce chemical concentrations in groundwater collected in an interceptor trench to below screening criteria.

62. 5-48. Would the preference for treatment be satisfied if the offsite landfill pretreated prior to disposal?

63. 5-71. The administrative feasibility discussion for Alternative 5 references the discussion for Alternative 3 for the IR-01/21 and IR-02 Northwest areas. The latter discusses CAMU designation and discharge to the Bay or wetlands, neither of which are part of Alternative 5. Please check the reference.

64. 5-86. Is the 15 months for soil excavation and pumping a total duration for the activity? Would flow rates of 30 gpm be sustained throughout this period? Please describe in further detail the conservative nature of extracting and treating for an additional 9 months.

65. 5-90. The discussion of environmental impacts references Alternative 3. Alternative 3 includes a sheetpile wall or slurry wall along the entire Parcel E shoreline, while Alternative 7 includes this feature only along the IR-01/21 and IR-02 Northwest areas. This is an important difference with regard to impacts on existing habitat along the shoreline and should be reflected in this discussion.

66. 5-98. Please explain why the activities for groundwater AOCs in Alternative 7 require twice as long to implement as the similar activities for groundwater AOCs for Alternative 8.

67. 5-102. Discharge to the POTW should be more protective of the environment than discharge directly to the Bay. First, the POTW must meet NPDES permit requirements for Bay discharge. Second, because none of the alternatives includes treatment to reduce the concentrations or mass of contaminants in extracted groundwater, water discharged to the Bay would receive less treatment than water discharged to the Bay after passage through the POTW. The different levels of treatment implied by the lower NPDES discharge requirements as compared to the POTW pretreatment standards is not relevant in this case; the water discharged has substantially the same character regardless of the point of discharge. In the event that

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SUBMISSION OF SAN FRANCISCO REGIONAL WATER QUALITY CONTROL BOARD (RWQCB) COMMENTS ON THE DRAFT PARCEL E FEASIBILITY STUDY (FS) REPORT

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QUESTIONS MAY BE DIRECTED TO:

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76. 5-107, IR-03 Soil and Parcel E Miscellaneous Soils. Are Alternatives 6 and 8 impacts considered similar to Alternative 2 impacts?

77. 5-107, IR-03 LNAPLs. Please provide additional discussion of the environmental impacts of an open excavation.

78. 5-107 and 5-108, Parcel E Groundwater. The length of sheetpile requiring installation in the Bay would appear to be significant in terms of the relative amount of existing habitat that would be impacted or destroyed. This should be reflected in the discussion.

79. 5-108, Time Required to Complete Remedial Action. The text states that groundwater remediation would control the time required, but then references implementation times that do not appear to reflect this. Please clarify.

80. 5-108, IR-03 Soil and Parcel E Miscellaneous Soils. Please discuss the technical feasibility of Alternative 2.

81. 5-109, Parcel E Groundwater. In the second paragraph, lines 3-4, should the reference be to the POTW vs. the Bay? How does excavation compare to POTW discharge?

82. appendix E, p. E-4. The text of Step 4 should be revised to reflect the inclusion of adsorption as an attenuation mechanism considered in the AT123D modeling exercise, as noted in Attachment E-1.

83. Table E-1. Please check the wording in Step 1, Bullet 4. In the second line, "...replaced with..." should be "...replaced the...".

84. Table E-2. Please review the footnotes and footnote references in this table. Footnotes b and d are not referenced. Footnote e is referenced twice. The column labeled "Recommended Criterion" is not footnoted. What are the sources of these values?

85. Table E-4. The labels for columns 6 and 7 are confusing. Column 6 appears to be a chemical-specific DAF for an assumed distance of 300 feet from the POC. Column 7 is the distance-adjusted DAF specific to the well under consideration. If this is correct, please revise the column headings for clarity.

Table 3. Please check the results for mercury at IR01MW05A and nickel at IR02MW101A1. Were there 1 or 2 exceedances? Also, it does not appear that nickel at IR14MW09A should have been screened out.